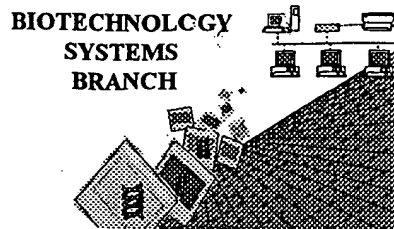


1636

16
43



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 08/487,032B
Source: 1602
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TECH CENTER 1600/2900

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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

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TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
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<http://www.uspto.gov/web/offices/pac/checker>

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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
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Revised 01/29/2002



1600

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:44

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:
 5 (i) APPLICANT: DOUGLAS SMITH
 7 (ii) TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES
 8 RELATING TO HELICOBACTER PYLORI FOR
 9 DIAGNOSTICS AND THERAPEUTICS
 11 (iii) NUMBER OF SEQUENCES: 941
 13 (iv) CORRESPONDENCE ADDRESS:
 14 (A) ADDRESSEE: LAHIVE & COCKFIELD, LLP
 15 (B) STREET: 28 State Street
 16 (C) CITY: Boston
 17 (D) STATE: Massachusetts
 18 (E) COUNTRY: USA
 19 (F) ZIP: 02109
 21 (v) COMPUTER READABLE FORM:
 22 (A) MEDIUM TYPE: Floppy disk
 23 (B) COMPUTER: IBM PC compatible
 24 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 25 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
 27 (vi) CURRENT APPLICATION DATA:
 28 (A) APPLICATION NUMBER: US/08/487,032B
 29 (B) FILING DATE: 07-Jun-1995
 31 (viii) ATTORNEY/AGENT INFORMATION:
 32 (A) NAME: Mandragouras, Amy E.
 33 (B) REGISTRATION NUMBER: 36,207
 34 (C) REFERENCE/DOCKET NUMBER: GTN-001
 36 (ix) TELECOMMUNICATION INFORMATION:
 37 (A) TELEPHONE: (617)227-7400
 38 (B) TELEFAX: (617)227-5941

RECEIVED

DEC. 10 2002

H CENTER 1600/290

Does Not Comply
Corrected Diskette Needed

pr 2-11

ERRORED SEQUENCES

18782 (2) INFORMATION FOR SEQ ID NO: 458:
 18784 (i) SEQUENCE CHARACTERISTICS:
 18785 (A) LENGTH: 122 amino acids
 18786 (B) TYPE: amino acid
 18787 (D) TOPOLOGY: linear
 18789 (ii) MOLECULE TYPE: protein
 18791 (iii) HYPOTHETICAL: YES
 18793 (vi) ORIGINAL SOURCE:
 18794 (A) ORGANISM: Helicobacter pylori
 18796 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 458:

P. 2

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:45

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

18798 Met Gln Ala Leu Lys Ser Leu Leu Glu Val Ile Thr Lys Leu Gln Asn
 18799 1 5 10 15
 18801 Leu Gly Gly Tyr Leu Met His Ile Ala Ile Phe Ile Ile Phe Ile Trp
 18802 20 25 30
 18804 Ile Gly Gly Leu Lys Phe Val Pro Tyr Glu Ala Glu Gly Ile Ala Pro
 18805 35 40 45
 18807 Phe Val Xaa Asn Ser Pro Phe Phe Ser Phe Met Tyr Lys Phe Glu Lys
 18808 50 55 60
 18810 Pro Ala Tyr Lys Gln His Lys Met Ser Glu Ser Gln Ser Met Gln Glu
 18811 65 70 75 80
 18813 Glu Met Gln Asp Asn Pro Lys Ile Val Glu Asn Lys Asn Gly Ile Lys
 18814 85 90 95
 18816 Lys Thr Ala Leu His Leu Val Ala Glu Gly Leu Gly Ile Thr Ile Met
 E--> 18817 100 105 110
 18819 Ile Leu Gly Ile Leu Val Leu Leu Gly Leu
 18820 115 120
 19501 (2) INFORMATION FOR SEQ ID NO: 473:
 19503 (i) SEQUENCE CHARACTERISTICS:
 19504 (A) LENGTH: 203 amino acids
 19505 (B) TYPE: amino acid
 19506 (D) TOPOLOGY: linear
 19508 * (ii) MOLECULE TYPE: protein
 19510 (iii) HYPOTHETICAL: YES
 19512 (vi) ORIGINAL SOURCE:
 19513 (A) ORGANISM: Helicobacter pylori
 19515 (ix) FEATURE:
 19516 (A) NAME/KEY: misc_feature
 19517 (B) LOCATION: 1...203
 19518 (D) OTHER INFORMATION: /note= "flagellar biosynthesis protein flha"
 19520 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 473:
 19522 Val Lys Lys Tyr Ala Glu Asp Phe Ile Thr Lys Asp Glu Val Lys Ser
 19523 1 5 10 15
 19525 Leu Leu Glu Arg Leu Ala Lys Asp Tyr Pro Thr Ile Val Glu Glu Ser
 19526 20 25 30
 19528 Lys Lys Ile Pro Thr Gly Ala Ile Arg Ser Val Leu Gln Ala Leu Leu
 19529 35 40 45
 19531 His Glu Lys Ile Pro Ile Lys Asp Met Leu Thr Ile Leu Glu Thr Ile
 19532 50 55 60
 19534 Thr Asp Ile Ala Pro Leu Val Gln Asn Asp Val Asn Ile Leu Thr Glu
 19535 65 70 75 80
 19537 Gln Val Arg Ala Arg Leu Ser Arg Val Ile Thr Asn Ala Phe Lys Ser
 19538 85 90 95
 19540 Glu Asp Gly Arg Leu Lys Phe Leu Thr Phe Ser Thr Asp Ser Glu Gln
 19541 100 105 110
 19543 Phe Leu Leu Asn Lys Leu Arg Glu Asn Gly Thr Ser Lys Ser Leu Leu
 19544 115 120 125
 19546 Leu Asn Val Gly Glu Leu Gln Lys Leu Ile Glu Gly Val Ser Glu Gly
 19547 130 135 140
 19549 Ala Met Lys Val Leu Gln Lys Gly Ile Ala Pro Val Ile Leu Ile Val

145 ← insert

← insert these numbers
 (do not use TAB codes
 between amino acid
 numbers. Use space
 characters.)

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:45

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

E--> 19550 145 150 155 160
 19552 Glu Pro Asn Leu Arg Lys Ala Leu Ser Lys Gln Met Glu Gln Ala Arg
 19553 165 170 175
 19555 Asn Asp Gly Leu Val Leu Ser His Ala Glu Leu Asp Pro Asn Ser Asn
 19556 180 185 190
 19558 Phe Glu Ala Leu Gly Thr Ile His Ile Asn Phe
 19559 195 200
 20574 (2) INFORMATION FOR SEQ ID NO: 490:
 20576 (i) SEQUENCE CHARACTERISTICS:
 20577 (A) LENGTH: 166 amino acids → 211 shown
 20578 (B) TYPE: amino acid
 20579 (D) TOPOLOGY: linear
 20581 (ii) MOLECULE TYPE: protein
 20583 (iii) HYPOTHETICAL: YES
 20585 (vi) ORIGINAL SOURCE:
 20586 (A) ORGANISM: Helicobacter pylori
 20588 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 490:
 20590 Val Gly Val Ile Tyr Ile Val Thr Thr Asn Thr Leu Asn Ile Leu Ser
 20591 1 5 10 15
 20593 Cys Glu Ser Phe Glu Ile Leu Glu Lys Arg Glu Leu Asp Thr Ser Gly
 20594 20 25 30
 20596 Val Thr Lys Thr Ser Thr Pro Phe Phe Ser Arg Val Glu Gly Ile Asp
 20597 35 40 45
 20599 Ala Gly Thr Leu Gly Lys Leu Phe Ser Gly Ser Gln Ser Lys Asn Tyr
 20600 50 55 60
 20602 Phe Ala Tyr Tyr Asp Ala Leu Val Lys Lys Glu Lys Arg Lys Glu Val
 20603 65 70 75 80
 20605 Arg Ile Glu Lys Lys Glu Glu Arg Ile Asp Ala Arg Glu Asn Lys Arg
 20606 85 90 95
 20608 Glu Ile Lys Gln Glu Ala Ile Lys Glu Pro Lys Lys Ala Asn Gln Gly
 20609 100 105 110
 W--> 20611 Thr Glu Asn Ala Pro Thr Leu Glu Glu Lys Xaa Tyr Gln Xaa Ala Glu
 20612 115 120 125
 W--> 20614 Arg Lys Phe Asp Ala Lys Xaa Xaa Arg Asp Arg Ser Xaa Asp Glu Xaa
 20615 130 135 140
 W--> 20617 Lys Lys Thr Xaa Pro Pro Lys Xaa Leu Trp Asn Leu Lys Lys Glu Lys
 20618 145 150 155 160
 W--> 20620 Lys Ser Met Xaa Lys Glu Xaa Glu Lys Glu Thr Glu Glu Arg Arg Lys
 E--> 20621 165 170 175 ← insert
 20623 Ala Leu Glu Met Asp Lys Glu Asn Glu Lys Val Asn Ala Lys Glu Asn
 20624 180 185 190
 20626 Glu Arg Glu Ile Asn Gln Glu Ser Ala Asn Glu Pro Ser Ser Glu Asn
 20627 195 200 205
 20629 Thr Pro Leu
 E--> 20630 210
 20810 (2) INFORMATION FOR SEQ ID NO: 494:
 20812 (i) SEQUENCE CHARACTERISTICS:
 20813 (A) LENGTH: 78 amino acids
 20814 (B) TYPE: amino acid

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:45

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

20815 (D) TOPOLOGY: linear
 20817 (ii) MOLECULE TYPE: protein
 20819 (iii) HYPOTHETICAL: YES
 20821 (vi) ORIGINAL SOURCE:
 20822 (A) ORGANISM: Helicobacter pylori
 20824 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 494:

Q--> 20826 Met Glu Asn Pro Ser Leu Gly Ser Asn Pro Leu Xaa Gln Lys Ala Met
 20827 1 5 10 15
 E--> 20829 Lys Asn Lys Xaa Ile Ser Lys Ser Leu Pro Tyr Try Arg Lys Met Pro) invalid
 20830 20 25 30
 W--> 20832 Asn Gly Ala Glu Val Tyr Gly Val Xaa Ile Leu Leu Pro Leu Phe Lys
 20833 35 40 45
 W--> 20835 Glu Asn Thr Xaa Xaa Trp Trp Gly Val Leu Met Ile Phe Phe Ile Xaa
 20836 50 55 60
 W--> 20838 Xaa Xaa Val Met Lys Ser Leu Lys Thr Gly Ala Ile Tyr Phe
 20839 65 70 75

20996 (2) INFORMATION FOR SEQ ID NO: 497:
 20998 (i) SEQUENCE CHARACTERISTICS: 99 shown
 20999 (A) LENGTH: 127 amino acids
 21000 (B) TYPE: amino acid
 21001 (D) TOPOLOGY: linear
 21003 (ii) MOLECULE TYPE: protein
 21005 (iii) HYPOTHETICAL: YES
 21007 (vi) ORIGINAL SOURCE:
 21008 (A) ORGANISM: Helicobacter pylori
 21010 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 497:

21012 Met Pro Val Ile Ile Gly Tyr Ile Cys Thr Gly Thr Val Leu Ala Ala
 21013 1 5 10 15
 21015 Phe Phe Lys Ile Asn Asp Phe Asn Leu Leu Ser Asp Ile Gly Glu Phe
 21016 20 25 30
 21018 Gly Ile Val Phe Leu Met Phe Lys Lys Gly Ile Glu Phe Asn Phe Asp
 21019 35 40 45
 21021 Lys Leu Lys Ser Ile Lys Gln Glu Val Leu Val Phe Gly Leu Leu Gln
 21022 50 55 60
 21024 Val Val Leu Cys Ala Leu Ile Ala Phe Leu Leu Gly Tyr Phe Val Leu
 21025 65 70 75 80
 21027 Gly Leu Ser Pro Phe Phe Pro Leu Phe Leu Ala Trp Gly Phe His Ser
 21028 85 90 95

E--> 21030 Leu Gln Pro

22260 (2) INFORMATION FOR SEQ ID NO: 522:
 22262 (i) SEQUENCE CHARACTERISTICS:
 22263 (A) LENGTH: 107 amino acids
 22264 (B) TYPE: amino acid
 22265 (D) TOPOLOGY: linear
 22267 (ii) MOLECULE TYPE: protein
 22269 (iii) HYPOTHETICAL: YES
 22271 (vi) ORIGINAL SOURCE:
 22272 (A) ORGANISM: Helicobacter pylori
 22274 (ix) FEATURE:

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:45

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

22275 (A) NAME/KEY: misc_feature
 22276 (B) LOCATION: 1...107
 22277 (D) OTHER INFORMATION: /note= "L-lactate permease"
 22279 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 522:
 22281 Val Phe Leu Thr Gly Ser Asp Thr Ser Ser Asn Leu Leu Phe Gly Ser
 22282 1 5 10 15
 22284 Leu Gln Met Val Ile Ala Thr Gln Leu Gly Leu Pro Glu Val Leu Phe
 22285 20 25 30
 22287 Leu Ala Ala Asn Thr Ser Gly Gly Val Val Gly Lys Met Ile Ser Pro
 22288 35 40 45
 E--> 22290 Gln Ser Ile Ala Ile Ala Cys Ala Ala Val Gly Leu Val Gly Lys Glu *invalid*
 22291 50 55 60
 22293 Ser Glu Met Phe Arg Phe Thr Val Lys Tyr Ser Ile Ala Leu Ala Ile
 22294 65 70 75 80
 22296 Ile Met Gly Ile Val Leu His Ser Tyr Arg Leu Cys Phe Leu Leu Tyr
 22297 85 90 95
 22299 Tyr Ser Ser Tyr Ser Tyr Leu Met Glu Gly Val
 22300 100 105
 23164 (2) INFORMATION FOR SEQ ID NO: 540:
 23166 (i) SEQUENCE CHARACTERISTICS: *149 shown*
 23167 (A) LENGTH: 149 amino acids
 23168 (B) TYPE: amino acid
 23169 (D) TOPOLOGY: linear
 23171 (ii) MOLECULE TYPE: protein
 23173 (iii) HYPOTHETICAL: YES
 23175 (vi) ORIGINAL SOURCE:
 23176 (A) ORGANISM: Helicobacter pylori
 23178 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 540:
 23180 Met Glu Val Met Asp Glu Ala Leu Leu Arg Ser Lys Arg Phe Asp Arg
 23181 1 5 10 15
 23183 Arg Ile Phe Ile Ser Leu Pro Asp Leu Leu Glu Arg Gln Ser Ile Leu
 23184 20 25 30
 23186 Glu Lys Leu Leu Glu Asn Lys Lys His Ala Leu Asp Tyr Leu Lys Ile
 23187 35 40 45
 23189 Ala Lys Ile Cys Val Gly Phe Ser Gly Ala Met Leu Ala Thr Leu Ile
 23190 50 55 60
 E--> 23192 Ala Glu Ser Ala Leu Asn Ala Leu Lys His Gln Arg Lys Glu Ile Thr *invalid*
 23193 65 70 75 80
 23195 His Gly Asp Ile Leu Glu Val Lys Asp Lys Ile Ala Tyr Gly Lys Lys
 23196 85 90 95
 23198 Lys Pro Gln Thr Leu Asp Glu Asn Gln Lys Glu Leu Val Ala Leu Tyr
 23199 100 105 110
 23201 Gln Ser Ala Lys Ala Leu Ser Ala Tyr Trp Leu Glu Ile Glu Phe Asp
 23202 115 120 125
 23204 Lys Ala Ser Leu Leu Gly Glu Phe Ile Ala Phe Asn Glu Asn Lys Ile
 23205 130 135 140
 23207 His Ala Arg Ala Arg
 E--> 23208 145
 24988 (2) INFORMATION FOR SEQ ID NO: 578:

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:45

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

24990 (i) SEQUENCE CHARACTERISTICS: → 9/ shown
 24991 (A) LENGTH: 90 amino acids
 24992 (B) TYPE: amino acid
 24993 (D) TOPOLOGY: linear
 24995 (ii) MOLECULE TYPE: protein
 24997 (iii) HYPOTHETICAL: YES
 24999 (vi) ORIGINAL SOURCE:
 25000 (A) ORGANISM: Helicobacter pylori
 25002 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 578:

W--> 25004 Met Ser Xaa Xaa Ala Ile Arg Phe Pro Xaa Xaa Leu Phe Ser Tyr Pro
 25005 1 5 10 15
 W--> 25007 Lys Pro Lys Ile Lys Ala Thr Asn Thr Ser Xaa Thr Val Leu Phe Ala
 25008 20 25 30
 25010 Tyr Pro Leu Lys Pro His Glu Met Ala Leu Leu Ala Leu Ala Thr Ser
 25011 35 40 45
 25013 Leu Leu Ala Pro Ile Phe Asn Ala Ile His Ser Thr Asn Ala Leu Asn
 25014 50 55 60
 25016 Ala Ile Lys Pro Asp Gly Thr Gly Ser Lys Ile Asn Pro Ile Ile Met
 25017 65 70 75 80
 25019 Pro Met Lys Ile Gln Lys Asn Lys Ala Met Arg
 E--> 25020 " 85 90 90

25495 (2) INFORMATION FOR SEQ ID NO: 587:
 25497 (i) SEQUENCE CHARACTERISTICS:
 25498 (A) LENGTH: 182 amino acids
 25499 (B) TYPE: amino acid
 25500 (D) TOPOLOGY: linear
 25502 (ii) MOLECULE TYPE: protein
 25504 (iii) HYPOTHETICAL: YES
 25506 (vi) ORIGINAL SOURCE:
 25507 (A) ORGANISM: Helicobacter pylori
 25509 (ix) FEATURE:
 25510 (A) NAME/KEY: misc_feature
 25511 (B) LOCATION: 1...182
 25512 (D) OTHER INFORMATION: /note= "cation efflux system
 25513 proteins"
 25515 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 587:

E--> 25517 Val Ile Val Gly Ala (le) Leu Val Leu Phe Phe Gly Thr Thr Ser Phe → invalid
 25518 1 5 10 15
 W--> 25520 Ile Asn Thr Pro Val Asp Ala Phe Xaa Asp Ile Ser Pro Thr Gln Val
 25521 20 25 30
 25523 Lys Ile Ile Leu Lys Leu Pro Gly Ser Ser Pro Glu Glu Met Glu Asn
 25524 35 40 45
 25526 Asn Ile Ala Arg Pro Leu Glu Leu Glu Leu Gly Leu Lys Gly Gln
 25527 50 55 60
 25529 Lys Ser Leu Arg Ser Ile Ser Lys Tyr Ser Ile Ser Asp Ile Thr Ile
 25530 65 70 75 80
 25532 Asp Phe Asp Asp Ser Val Asp Ile Tyr Leu Ala Arg Asn Ile Val Asn
 25533 85 90 95
 25535 Glu Arg Leu Ser Ser Val Met Lys Asp Leu Pro Val Gly Val Glu Gly

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:45

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

```

25536          100          105          110
25538 Gly Met Ala Pro Ile Val Thr Pro Leu Ser Asp Ile Phe Met Phe Thr
25539          115          120          125
25541 Ile Asp Gly Asn Ile Thr Glu Ile Glu Lys Arg Gln Leu Leu Asp Phe
25542          130          135          140
25544 Val Ile Arg Pro Gln Leu Arg Met Ile Ser Gly Val Ala Asp Val Asn
25545 145          150          155          160
25547 Ser Ile Gly Gly Phe Ser Arg Ala Phe Val Ile Val Pro Asp Phe Asn
25548          165          170          175
25550 Asp Met Ala Arg Leu Gly
25551          180

```

31199 (2) INFORMATION FOR SEQ ID NO: 690:

31201 (i) SEQUENCE CHARACTERISTICS:

31202 (A) LENGTH: 144 amino acids

31203 (B) TYPE: amino acid

31204 (D) TOPOLOGY: linear

31206 (ii) MOLECULE TYPE: protein

31208 (iii) HYPOTHETICAL: YES

31210 (vi) ORIGINAL SOURCE:

31211 (A) ORGANISM: Helicobacter pylori

31213 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 690:

```

31215 Met Lys Asn Leu Arg His Phe Arg Lys Leu Ile Ala Phe Leu Gly Phe
31216 1          5          10          15
31218 Ser Pro Leu Leu Leu Gln Ala Asp Met Thr Thr Phe Phe Asn Ser Ile
31219          20          25          30
31221 Glu Gln Gln Leu Thr Ser Pro Thr Ala Lys Gly Ile Leu Met Val Ile
31222          35          40          45
31224 Phe Leu Gly Leu Ala Ile Phe Ile Trp Lys Asn Leu Asp Arg Trp Lys
31225          50          55          60
31227 Glu Ile Leu Met Thr Val Leu Ala Leu Lys Glu Val Pro Met Gln Tyr
31228 65          70          75          80
31230 Phe Ile Pro Ala Ser Asn Leu Lys Glu Ile Ser Ser Lys Glu Lys Phe
31231          85          90          95

```

E--> 31233 Leu ^{dk}(Trp) Leu Asn Ala Lys Ser (Phr) Leu Leu Ser Gly Phe Val Pro Phe
 31234 100 105 110

```

31236 Ile Met Ile Pro Trp Leu Asp Ile Leu Asn Ser Phe Val Leu Tyr Val
31237          115          120          125
31239 Cys Phe Leu Leu Ile Phe Ser Ile Ala Glu Phe Phe Asp Glu Asp Ile
31240          130          135          140

```

32796 (2) INFORMATION FOR SEQ ID NO: 723:

32798 (i) SEQUENCE CHARACTERISTICS:

32799 (A) LENGTH: 174 amino acids

32800 (B) TYPE: amino acid

32801 (D) TOPOLOGY: linear

32803 (ii) MOLECULE TYPE: protein

32805 (iii) HYPOTHETICAL: YES

32807 (vi) ORIGINAL SOURCE:

32808 (A) ORGANISM: Helicobacter pylori

32810 (ix) FEATURE:

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:46

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

32811 (A) NAME/KEY: misc_feature
 32812 (B) LOCATION: 1...174
 32813 (D) OTHER INFORMATION: /note= "POTASSIUM/COPPER-TRANSPORTING
 32814 ATPASE A"
 32816 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 722: *invalid*

E--> 32818 Met Arg Cys Glu Leu Trp Arg Arg Tyr Gly Gln Htr His Ala Lys Glu
 32819 1 5 10 15
 32821 Phe gly Pro Tyr Arg Tyr Leu Lys Leu Val Gly Ala Ser Gly Val Gly
 32822 20 25 30
 32824 Arg Phe Phe Ile Lys Gly Ala Phe Tyr Gly Leu Lys Asn Gly Val Leu
 32825 35 40 45
 32827 Gly Met Asp Leu Ser Val Ser Phe Gly Ala Leu Ser Ala Phe Val Tyr
 32828 50 55 60
 32830 Ser Leu Tyr Ala Met Leu Val Ser Gln Glu Thr Tyr Phe Gly Ala Ser
 32831 65 70 75 80
 E--> 32833 Ser Thr Ile Leu Thr Leu Val Phe Gly Ser Lys Phe Leu Glu Lys Lys *invalid*
 32834 85 90 95
 32836 Ala Arg Leu Phe Ala Asn Glu Lys Cys leu Ala Leu Glu Ser His Glu
 32837 100 105 110
 32839 Ile His Ser Val Ile Val Val Glu Asn Gly Lys Gln Ile Glu Lys His
 32840 115 120 125
 32842 Pro Lys Asp Val Ala Ile Gly Ser Val Val Trp Val Pro Ser Gly Ala
 32843 130 135 140
 32845 Lys Ile Ala leu Asp Gly Val Leu Leu Lys Ser Ala Ser Val Asp Ala
 32846 145 150 155 160
 32848 Ser Leu Ile Ser Gly Glu Phe Lys Pro Leu Glu Ile Gly Gly
 32849 165 170

32974 (2) INFORMATION FOR SEQ ID NO: 727:
 32976 (i) SEQUENCE CHARACTERISTICS:
 32977 (A) LENGTH: 77 amino acids
 32978 (B) TYPE: amino acid
 32979 (D) TOPOLOGY: linear
 32981 (ii) MOLECULE TYPE: protein
 32983 (iii) HYPOTHETICAL: YES
 32985 (vi) ORIGINAL SOURCE:
 32986 (A) ORGANISM: Helicobacter pylori
 32988 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 727:

32990 Val His Ser Lys Glu Arg Lys Glu Phe Leu Val Ser Glu Phe Lys Ala
 32991 1 5 10 15
 32993 Ser Ala Val Glu Met Glu Gly Ala Ser Val Ala Phe Val Cys Gln Lys
 E--> 32994 ~~20~~ 20 25 30 *edit numbering*
 32996 Phe Gly Val Pro Cys Cys Val Leu Arg Ser Ile Ser Asp Asn Ala Asp
 E--> 32997 35 40 45
 32999 Glu Lys Ala Gly Met Ser Phe Asp Glu Phe Leu Glu Lys Ser Ala His
 E--> 33000 50 55 60
 33002 Thr Ser Ala Lys Phe Leu Lys Ser Met Val Asp Glu Leu
 E--> 33003 65 70 75

37478 (2) INFORMATION FOR SEQ ID NO: 821:
 37480 (i) SEQUENCE CHARACTERISTICS:

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:46

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

37481 (A) LENGTH: 84 amino acids
 37482 (B) TYPE: amino acid
 37483 (D) TOPOLOGY: linear
 37485 (ii) MOLECULE TYPE: protein
 37487 (iii) HYPOTHETICAL: YES
 37489 (vi) ORIGINAL SOURCE:
 37490 (A) ORGANISM: Helicobacter pylori
 37492 (ix) FEATURE:
 37493 (A) NAME/KEY: misc_feature
 37494 (B) LOCATION: 1...84
 37495 (D) OTHER INFORMATION: /note= "Plasmodium falciparum gametocyte
 37496 specific antigen"

E--> 37498 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 824 821

37500 Val Leu Val Val Gly Lys Pro Asn Glu Ser Tyr Ala Asp Thr His Ala
 37501 1 5 10 15
 37503 Arg Ile Glu His Phe Ile Lys Leu Val Asp Phe Lys Gly Glu Ile Val
 37504 20 25 30
 37506 Phe Ile Asn Glu Asp Asn Ser Ser Val Glu Ala Tyr Glu Asn Leu Glu
 37507 35 40 45
 37509 His Leu Gly Lys Lys Asn Lys Arg Ile Ala Thr Lys Asp Gly Arg Leu
 37510 50 55 60
 37512 Asp Ser Leu Ser Ala Cys Arg Ile Leu Glu Arg Tyr Cys Gln Gln Val
 37513 65 70 75 80
 37515 Leu Lys Lys Gly

38831 (2) INFORMATION FOR SEQ ID NO: 849:

(i) SEQUENCE CHARACTERISTICS:

38834 (A) LENGTH: 46 amino acids

38835 (B) TYPE: amino acid

38836 (D) TOPOLOGY: linear

38838 (ii) MOLECULE TYPE: protein

38840 (iii) HYPOTHETICAL: YES

38842 (vi) ORIGINAL SOURCE:

38843 (A) ORGANISM: Helicobacter pylori

38845 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 849:

38847 Val Ile Val Gly Val Gly Lys Ser Ala Leu Val Ala Gln Lys Ile Val
 38848 1 5 10 15
 38850 Ala Ser Met Leu Ser Thr Gly Asn Arg Ser Ala Phe Leu His Pro Thr
 38851 20 25 30

E--> 38853 Glu Ala Met His Gly Asp Leu Gly Met Gly Lys Lys Thr Mer invalid

39047 (2) INFORMATION FOR SEQ ID NO: 854:

(i) SEQUENCE CHARACTERISTICS:

39050 (A) LENGTH: 153 amino acids

39051 (B) TYPE: amino acid

39052 (D) TOPOLOGY: linear

39054 (ii) MOLECULE TYPE: protein

39056 (iii) HYPOTHETICAL: YES

39058 (vi) ORIGINAL SOURCE:

39059 (A) ORGANISM: Helicobacter pylori

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:46

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

39061 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 854:

39063 Met Asp Ala Leu Glu Ile Thr Gln Lys Leu Ile Ser Tyr Pro Thr Ile

39064 1 5 10 15

39066 Thr Pro Lys Glu Cys Gly Ile Phe Glu Tyr Ile Lys Ser Leu Phe Pro

39067 20 25 30

39069 Ala Phe Lys Thr Leu Glu Cys Glu Lys Asn Gly Val Lys Asn Leu Phe

39070 35 40 45

39072 Leu Tyr Arg Ile Phe Asn Pro Leu Lys Lys His Ala Glu Lys Glu His

39073 50 55 60

W--> 39075 Ala Lys Glu Lys His Val Lys Glu Asn Val Xaa Pro Leu His Phe Cys

39076 65 70 75 80

E--> 39078 Leu Gln Gly Ile Leu Unk Ser Cys Leu Leu Gly Xaa Xaa Ala Xaa Asp

39079 85 90 95

W--> 39081 Ser Phe Xaa Xaa Ile Ile Lys Glu Gly Phe Leu Tyr Gly Arg Gly Ala

39082 100 105 110

W--> 39084 Gln Asp Met Lys Gly Gly Val Gly Xaa Phe Leu Gly Ala Xaa Xaa Asn

39085 115 120 125

W--> 39087 Phe Asn Xaa Lys Xaa Xaa Phe Xaa Phe Leu Phe Tyr Leu Thr Ser Asp

39088 130 135 140

W--> 39090 Glu Glu Gly Thr Arg Xaa Phe Xaa His

39091 145 150

C--> 43542 (2) INFORMATION FOR SEQ ID NO: 941:

43544 (i) SEQUENCE CHARACTERISTICS:

43545 (A) LENGTH: 55 amino acids

43546 (B) TYPE: amino acid

43547 (D) TOPOLOGY: linear

43549 (ii) MOLECULE TYPE: protein

43551 (iii) HYPOTHETICAL: YES

43553 (vi) ORIGINAL SOURCE:

43554 (A) ORGANISM: Helicobacter pylori

43556 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 941:

43558 Met Trp Leu Ser Glu His Phe Ala Ala Lys Gly Gly Asn Pro Leu Phe

43559 1 5 10 15

43561 Ala Pro Tyr Tyr Leu Gln Asp Asn Pro Thr Glu His Ile Val Thr Leu

43562 20 25 30

43564 Met Lys Asp Ile Thr Ser Ala Leu Gly Met Leu Ser Asn Ser Asn Leu

43565 35 40 45

43567 Lys Asn Asn Ser Thr Asp Val Leu Gln Leu Asn Thr Tyr Thr Gln Gln

43568 50 55 60

43570 Met Ser Arg Leu Ala Lys Leu Ser Asn Phe Ala Ser Phe Asp Ser Thr

43571 65 70 75 80

43573 Asp Phe Ser Glu Arg Leu Ser Ser Leu Lys Asn Gln Arg Phe Ala Asp

43574 85 90 95

43576 Ala Val Pro Asn Ala Met Asp Val Ile Leu Lys Tyr Ser Gln Arg Asp

43577 100 105 110

43579 Lys Leu Lys Asn Asn Leu Trp Ala Thr Gly Val Gly Gly Val Ser Phe

43580 115 120 125

43582 Val Glu Asn Gly Thr Gly Thr Leu Tyr Gly Val Asn Val Gly Tyr Asp

43583 130 135 140

invalid
if this
denotes
"unknown"
use Xaa

194
(see p.11)

RAW SEQUENCE LISTING

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:47

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

43585	Arg	Phe	Val	Arg	Gly	Val	Ile	Val	Gly	Gly	Tyr	Ala	Ala	Tyr	Gly	Tyr
43586	145					150					155					160
43588	Ser	Gly	Phe	Tyr	Glu	Arg	Ile	Thr	Ser	Ser	Lys	Ser	Asp	Asn	Val	Asp
43589					165					170						175
43591	Val	Gly	Met	Tyr	Ala	Arg	Ala	Phe	Ile	Lys	Lys	Ser	Glu	Leu	Thr	Phe
43592					180					185						190

E--> 43594 Arg Arg

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/08/487,032B

DATE: 11/27/2002
TIME: 09:12:48

Input Set : D:\Seqlistcorr2.txt
Output Set: N:\CRF4\11272002\H487032B.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:666; Line(s) 30012

VERIFICATION SUMMARY

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:48

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

L:28 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:280 M:111 C: (47) String data converted to upper case,
M:111 Repeated in SeqNo=6
L:1844 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
L:2860 M:111 C: (47) String data converted to upper case,
M:111 Repeated in SeqNo=74
L:6118 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:6191 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:6390 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:6666 M:111 C: (47) String data converted to upper case,
L:7487 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:8652 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:8802 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:9469 M:111 C: (47) String data converted to upper case,
L:10267 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:13814 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
L:13989 M:111 C: (47) String data converted to upper case,
L:15383 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:387 after pos.:0
L:15386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:387 after pos.:16
L:15488 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:389 after pos.:0
L:15588 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:391 after pos.:48
L:15614 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:392 after pos.:16
L:15647 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:392 after pos.:192
L:15862 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:395 after pos.:64
L:16101 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:399 after pos.:240
L:16110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:399 after pos.:288
L:16286 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:402 after pos.:256
L:16330 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:403 after pos.:128
L:16336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:403 after pos.:160
L:16532 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:407 after pos.:0
L:16767 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:412 after pos.:48
L:16770 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:412 after pos.:64
L:17183 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:421 after pos.:80
L:17212 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:422 after pos.:32
L:17268 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:423 after pos.:128
L:17431 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:427 after pos.:192
L:17608 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:432 after pos.:48
L:17640 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:433 after pos.:32
L:17646 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:433 after pos.:64
L:17788 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:437 after pos.:0
L:18347 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
L:18392 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:449 after pos.:48
L:18659 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:454 after pos.:112
L:18668 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:454 after pos.:160
L:18807 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:458 after pos.:48
L:18817 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:458
L:18994 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:461 after pos.:160

VERIFICATION SUMMARY

DATE: 11/27/2002

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TIME: 09:12:48

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

L:19254 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:467 after pos.:0
 L:19550 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:473 ✓
 L:20611 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:490 after pos.:112
 L:20614 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:490 after pos.:128
 L:20617 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:490 after pos.:144
 L:20620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:490 after pos.:160
 L:20621 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:490 ✓
 L:20630 M:203 E: No. of Seq. differs, LENGTH:Input:166 Found:211 SEQ:490
 L:20826 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:494 after pos.:0
 L:20829 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:494 after pos.:16
 L:20829 M:330 E: (2) Invalid Amino Acid Designator, 1 ✓
 L:20832 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:494 after pos.:32
 L:20835 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:494 after pos.:48
 L:20838 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:494 after pos.:64
 L:21030 M:203 E: No. of Seq. differs, LENGTH:Input:127 Found:99 SEQ:497 ✓
 L:21122 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:499 after pos.:0
 L:21128 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:499 after pos.:32
 L:21131 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:499 after pos.:48
 L:21134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:499 after pos.:64
 L:21276 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:502 after pos.:160
 L:21279 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:502 after pos.:176
 L:21553 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:508 after pos.:16
 L:21593 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:509 after pos.:32
 L:21608 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:509 after pos.:112
 L:22167 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:519 after pos.:64
 L:22173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:519 after pos.:96
 L:22290 M:330 E: (2) Invalid Amino Acid Designator, 1 ✓
 L:22320 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
 L:22333 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:523 after pos.:48
 L:22436 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
 L:23192 M:330 E: (2) Invalid Amino Acid Designator, 1 ✓
 L:23208 M:203 E: No. of Seq. differs, LENGTH:Input:148 Found:149 SEQ:540 ✓
 L:23569 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
 L:24040 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
 L:25020 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:578 ✓
 L:25020 M:203 E: No. of Seq. differs, LENGTH:Input:90 Found:91 SEQ:578 ✓
 L:25517 M:333 E: Wrong sequence grouping, Amino acids not in groups! ✓
 L:25517 M:330 E: (2) Invalid Amino Acid Designator, 1 ✓
 L:26015 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
 L:26337 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
 L:26504 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
 L:29075 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
 L:31178 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
 L:31233 M:330 E: (2) Invalid Amino Acid Designator, 1 ✓
 L:31928 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
 L:32818 M:330 E: (2) Invalid Amino Acid Designator, 1 ✓
 L:32833 M:330 E: (2) Invalid Amino Acid Designator, 1 ✓
 L:32994 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:727 ✓
 M:332 Repeated in SeqNo=727

VERIFICATION SUMMARY

DATE: 11/27/2002

PATENT APPLICATION: US/08/487,032B

TIME: 09:12:48

Input Set : D:\Seqlistcorr2.txt

Output Set: N:\CRF4\11272002\H487032B.raw

L:37498 M:212 E: (34) Invalid or duplicate Sequence ID Number, Value=[824:] ✓
L:38853 M:330 E: (2) Invalid Amino Acid Designator, 1 ✓
L:38926 M:220 C: Keyword misspelled or invalid format, [(xi) SEQUENCE DESCRIPTION: SEQ ID NO:]
L:39078 M:330 E: (2) Invalid Amino Acid Designator, 1 ✓
L:40255 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
L:41817 M:220 C: Keyword misspelled or invalid format, [(D) TOPOLOGY:]
L:41817 M:246 W: Invalid value of Alpha Sequence Header Field, [TOPOLOGY:], SeqNo=906
L:43424 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
L:43513 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
L:43542 M:220 C: Keyword misspelled or invalid format, [(2) INFORMATION FOR SEQ ID NO:]
L:43594 M:203 E: No. of Seq. differs, LENGTH:Input:55 Found:194 SEQ:941 ✓